



COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

DEVAL L. PATRICK  
Governor

TIMOTHY P. MURRAY  
Lieutenant Governor

IAN A. BOWLES  
Secretary

LAURIE BURT  
Commissioner

**ASBESTOS-IN-SOIL**  
**DRAFT FINAL REGULATIONS AND POLICIES**

Prepared by: Bureau of Waste Prevention  
Bureau of Waste Site Cleanup

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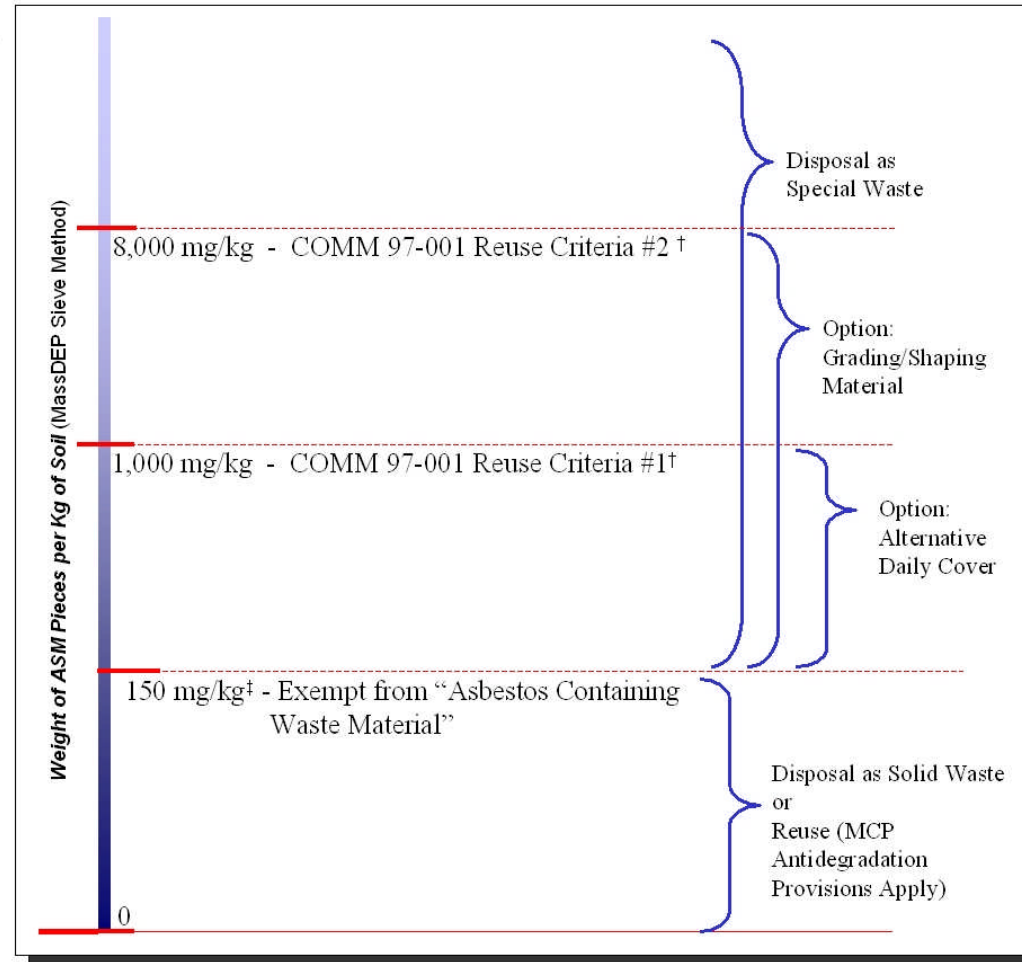
## ASBESTOS IN SOIL (“AIS”) STREAMLINING REGULATION AND MANAGEMENT

### Disposal Options for Soil containing Asbestos Source Material, or “ASM”

Re-Use Concentrations  
Resulting from Measuring  
the Weight of ASM (*Not*  
*Asbestos Fibers*) in Soil  
Using a Sieving  
Technique.

Example:

- Large, representative sample dried, weighed
- sieved using specified mesh
- identify, count & weigh ASM pieces on sieve
- ASM identified using standard bulk soil analyses (if necessary)



† See Proposed Amendment of MassDEP Policy # COMM97-001, “Reuse and Disposal of Contaminated Soil at Massachusetts Landfills”

‡ See Proposed Revisions to the Air Quality Regulations



## 1.0 Proposed Asbestos-Related Changes to the Massachusetts Contingency Plan

**NOTE TO REVIEWERS:** The following changes will be made in the MCP clarify the notification and cleanup requirements for asbestos fibers and asbestos-containing material in soil. These changes include new notification requirements and amendments of 310 40.0030, Management of Remediation Waste, to ensure that off-site management of soil containing asbestos meets all applicable state and federal requirements.

### 1.1. Definitions

40.0006: continued

~~Debris-Containing Releasable Asbestos-Asbestos Source Material (“ASM”) means Debris that includes any material (1) that contains 1 percent or more asbestos by area (as determined by a laboratory certified by the Massachusetts Division of Occupational Safety and using a method approved by the U.S. Environmental Protection Agency), and (2) that, (a) when dry, can be crumbled, pulverized or reduced to powder by hand pressure, or (b) has become crumbled, broken or crushed.~~

Visible Asbestos Source Material means Asbestos Source Material that is 3 inches or more in any dimension.

### 1.2. Notification Exemptions

**NOTE TO REVIEWERS:** The current regulations contain a definition and related notification exemption that could apply to certain limited asbestos-in-soil conditions. These exemptions apply to “building materials still serving their original intended use or emanating from such use...” The Department will add asbestos-specific 120-day notification exemptions at the end of the current list at 310 CMR 40.031. This exemption allows the Department to direct the cleanup of these conditions to the Asbestos Abatement Program, rather than the MCP. The second eliminates notification for just fibers of asbestos in soil where there is no known source. Known sources of asbestos fibers would be subject to existing notification requirements, such as the RQ for asbestos and the general requirement to notify about Imminent Hazards. **QUESTION: If we add a line in the definition of ASM that specifically excludes fibers, do we need want this confusing notification exemption?**

310 CMR 40.0317: continued

(23) releases of asbestos from abandoned building components or structures, such as pipes, boilers or duct banks, that are intact or substantially intact. For the purposes of this section, “substantially intact” shall mean that the original structure remains recognizable, the ~~Debris-Containing Asbestos in Friable Material-Asbestos Source Material~~ appears to have originated from the structure, and that such ~~Debris-Material~~ has not been dispersed more than one foot from the structure.

(24) releases indicated solely by the presence of unconsolidated asbestos fibers in soil, provided that the source of the asbestos fibers is not known.

### 1.3. 2-Hour Notification Requirements

**NOTE TO REVIEWERS:** *There are currently two 2-hour notification requirements that apply to asbestos. One is specific to the contaminant, the notification for a sudden release greater than the 1-pound Reportable Quantity. The other is a general requirement of a 2-hour notification for any contaminant posing an Imminent Hazard. The Department will add a separate 2-Hour notification requirement for quantities of Visible Asbestos Source Material near sensitive receptors.*

310 CMR 40.0321: continued

(2) For the purpose of fulfilling the "Two Hour" release notification obligations of 310 CMR 40.0311(7), the following releases could pose an Imminent Hazard to human health:

(a) a release to the environment indicated by the measurement of oil and/or hazardous material in a private drinking water supply well at a concentration equal to or greater than ten times the Category RCGW-1 Reportable Concentration, as described in 310 CMR 40.0360 through 40.0369 and listed at 310 CMR 40.1600; or

(b) a release to the environment indicated by the measurement of concentrations of hazardous material, equal to or greater than any of the following concentrations at the ground surface or within a depth of twelve inches below the ground surface, at any location within 500 feet of a residential dwelling, school, playground, recreation area or park, unless access by children is controlled or prevented by means of bituminous pavement, concrete, fence, or other physical barrier

Hazardous Material	CAS number	Concentration (ug/g dry wt)
Arsenic (total)	7440382	40
Cadmium (total)	7440439	60
Chromium (VI) (or Total Chromium in the absence of CrVI data)	18540299	200
Cyanide (available)	57125	100
Mercury (total)	7439976	300
Methyl Mercury	22967926	10
PCB (total)	1336363	10

or

(c) a release to the environment for which estimated long-term risk levels associated with current exposures are greater than ten times the Cumulative Receptor Risk Limits in 310 CMR 40.0993(6). Past exposures may be included in such evaluations to the extent that it is reasonable to quantify those exposures; or

(d) a release to the environment indicated by the presence of either 5 cubic feet or more, or 5 pounds or more, of ~~Debris Containing Releasable Visible Asbestos Source Material~~.

at the ground surface at any location within 500 feet of a residential dwelling, school, playground, recreation area or park.

(3) ...

#### **1.4. 120-Day Notification Requirements (310 CMR 40.0315)**

***NOTE TO REVIEWERS:** The Department will establish criteria for reporting Asbestos Source Material. This material is defined to be big enough (3 inches or greater in any dimension) to be identified through visual observation. This reporting criteria will be used to identify sites that require further investigation to determine the risk posed by the contamination, and appropriate remedial actions (if any are necessary). The Department is continuing to develop and test an analytical method that would reliably quantify smaller pieces of asbestos or fibers in soil. MassDEP will evaluate the notification criteria after 2 years of implementation.*

##### **40.0315: Releases Which Require Notification Within 120 Days**

Except as provided in 310 CMR 40.0317 or 40.0318, persons required to notify under 310 CMR 40.0331 shall notify the Department not more than 120 days after obtaining knowledge that a release meets one or more of the following sets of criteria:

- (1) a release to the environment indicated by the measurement of one or more hazardous materials in soil or groundwater in an amount equal to or greater than the applicable Reportable Concentration described in 310 CMR 40.0360 through 40.0369 and listed at 40.1600;
- (2) a release to the environment indicated by the measurement of oil and/or waste oil in soil in an amount equal to or greater than the applicable Reportable Concentration described in 310 CMR 40.0360 through 40.0369 and listed at 40.1600, where the total contiguous volume of the oil and/or waste oil contaminated soil is equal to or greater than two cubic yards;
- (3) a release to the environment indicated by the measurement of oil in groundwater in an amount equal to or greater than the applicable Reportable Concentration described in 310 CMR 40.0360 through 40.0369 and listed at 40.01600;
- (4) a release to the environment indicated by the presence of a subsurface Non-Aqueous Phase Liquid (NAPL) having a measured thickness equal to or greater than 1/8 inch and less than 1/2 inch; or
- (5) except as provided in 310 CMR 40.0317 and 40.0321, a release to the environment indicated by the presence of either 1 cubic foot or more, or 1 pound or more, of ~~Debris Containing Releasable Asbestos~~ Visible Asbestos Source Material located at the ground surface or mixed in subsurface soil.

## 1.5 Limited Removal Actions

### 40.0318: Limited Removal Actions

- (1) Limited Removal Actions may be undertaken by RPs, PRPs or Other Persons prior to notification to the Department of those "120 Day Notification" releases described in 310 CMR 40.0315.
- (2) Limited Removal Actions shall not be initiated or continued:
  - (a) after obtaining knowledge that a release or threat of release requires notification under the "2 Hour" or "72 Hour" notification provisions of 310 CMR 40.0311 through 40.0314, whether or not notification has been made to the Department;
  - (b) following notification to the Department by any person listed at 310 CMR 40.0331 of any release or threat of release of oil and/or hazardous material at the disposal site which requires notification under 310 CMR 40.0315; or
  - (c) at any Location to Be Investigated or disposal site subject to the provisions of 310 CMR 40.0600.
- (3) RPs, PRPs or Other Persons who undertake Limited Removal Actions shall conform to the Response Action Performance Standard specified in 310 CMR 40.0191.
- (4) Limited Removal Actions shall be restricted to the excavation and off-site recycling, reuse, treatment, and/or disposal of not more than the following cumulative volumes of soil removed from a disposal site: ~~with measured concentrations of oil or hazardous material equal to or greater than an applicable Reportable Concentration:~~
  - (a) not more than 100 cubic yards of soil with measured concentrations of oil equal to or greater than an applicable Reportable Concentration, contaminated solely by a release of oil or waste oil; ~~and~~
  - (b) not more than 20 cubic yards of soil with measured concentrations of oil or hazardous material equal to or greater than an applicable Reportable Concentration, contaminated by a release of hazardous material or a mixture of oil or waste oil and hazardous material; ~~and~~
  - (c) not more than 100 cubic yards of soil contaminated by a release of asbestos resulting in the presence of Visible Asbestos Source Material in an amount equal to or greater than the criteria specified at 310 CMR 40.0315(5).

## 1.6. Management of Remediation Waste, 310 CMR 40.0030

*310 CMR 40.0030 et. seq. establishes requirements that have been designed to ensure that contaminated media containing Oil and Hazardous Materials that could be regulated as “hazardous wastes” pursuant to MGL c. 21C and 310 CMR 30.000 are appropriately managed. While asbestos is already a listed Hazardous Material under the MCP, management of wastes containing asbestos is regulated by the Massachusetts Air Quality Regulations [310 CMR 7.15 (e)] and Solid Waste Management Regulations (310 CMR 19.061), and by the National Emission Standards for Hazardous Air Pollutants (40 CFR 150 et. seq).*

*MassDEP will add a new paragraph to 310 CMR 40.0032 (“Contaminated Media and Contaminated Debris” to direct people who are conducting response actions to the appropriate requirements for handling asbestos-contaminated soil.*

*In addition, the “anti-degradation” provisions of the MCP in 310 CMR 40.032(3) will also be amended to clarify that management of asbestos fibers in soil that would be exempt from both MCP and BWP asbestos program notifications would remain subject to the MCP’s “anti-degradation” provisions.*

### 40.0032 Contaminated Media and Contaminated Debris

...

- (3) Soils containing oil or waste oil at concentrations less than an otherwise applicable Reportable Concentration and that are not otherwise a hazardous waste, and soils that contain one or more hazardous materials at concentrations less than an otherwise applicable Reportable Concentration and that are not a hazardous waste may be transported from a disposal site without notice to or approval from the Department under the provisions of this Contingency Plan, provided that such soil:
  - (a) Is not disposed or reused at locations where the concentrations of oil or hazardous materials in the soil would be in excess of a release notification threshold applicable at the receiving site, as delineated in 310 CMR 40.0300 and 40.1600; and
  - (b) Is not disposed or reused at locations where existing concentrations of oil and/or hazardous material at the receiving site are significantly lower than the levels of those oil and/or hazardous materials present in the soil being disposed or reused.
- (4) Soil contaminated solely with ~~Debris-Containing Releasable-Asbestos Source Material~~ and soil contaminated with such ~~DebrisMaterial~~ and oil and/or hazardous materials that are not categorized as hazardous waste pursuant to 310 CMR 30.000, and that is associated with response actions conducted pursuant to 310 CMR 40.0000 and/or with abatement work conducted pursuant to 310 CMR 7.15, shall be managed in accordance with:
  - (a) The work practices and disposal requirements described in 310 CMR 7.15(e);
  - (b) The use of a Bill of Lading to accompany off-site shipments for disposal described in 40 CFR 61.150(d); and/or
  - (c) Disposal or re-use in an appropriate facility in accordance with 310 CMR 19.061.
- (5) Soil contaminated with ~~Debris-Containing Releasable-Asbestos Source Material~~ and one or more hazardous wastes shall be managed in accordance with the provisions of 310 CMR 30.000, and shall use a Hazardous Waste Manifest to accompany off-site shipments for disposal.
- (6) Contaminated Groundwater and Contaminated Surface Water that is collected, treated, conveyed, withdrawn, contained or discharged at or from a disposal site as part of a response

action shall be managed in compliance with applicable provisions of 310 CMR 40.0030 and 40.0040.

(7) Contaminated Media and Contaminated Debris managed under the Bill of Lading process described in 310 CMR 40.0034 shall not be disposed of at a land disposal facility if a feasible alternative exists that involves the reuse, recycling, destruction, and/or detoxification of such materials. An evaluation of whether such an alternative is feasible shall consider:

- (a) the volume and physical characteristics of the Contaminated Media and Debris;
- (b) the levels of oil and/or hazardous materials present within the Contaminated Media and Debris; and
- (c) the relative costs of management options.



## 2.0 Proposed Revisions to the Air Quality Regulations

Note: Proposed new language is in **bold**.

### 7.00 AIR POLLUTION CONTROL (DEFINITIONS)

ASBESTOS-CONTAINING WASTE MATERIAL means any friable asbestos-containing material removed during a demolition/renovation project and anything contaminated in the course of a demolition/renovation project including asbestos waste from control devices, bags or containers that previously contained asbestos, contaminated clothing, materials used to enclose the work area during the demolition/renovation operation, and demolition/renovation debris, **but not including: 1) soil containing ~~asbestos-containing material~~ Asbestos Source Material as defined in 310 CMR 40.0006 at a concentration less than 150 mg<sub>ACM</sub>/kg<sub>soil</sub>; 2) soil containing ~~asbestos-containing material~~ Asbestos Source Material at a concentration less than 1,000 mg<sub>ACM</sub>/kg<sub>soil</sub> that is used for alternative daily cover at a Massachusetts landfill operating under a permit issued pursuant to 310 CMR 19.000; 3) soil containing ~~asbestos-containing material~~ Asbestos Source Material at a concentration less than 8,000 mg<sub>ACM</sub>/kg<sub>soil</sub> that is used for grading and shaping material at a landfill that is closing pursuant to 310 CMR 19.000; or 4) soil containing asbestos only in the form of unconsolidated fibers in the absence of source material.**

### 7.15: U Asbestos

#### (1) Standards for Demolition/Renovation

- (a) Applicability. No person shall cause, suffer, allow, or permit the demolition/renovation, installation, reinstallation, handling, transporting, storage, or disposal of a facility or facility component that contains asbestos, asbestos-containing material, or asbestos-containing waste material in a manner which causes or contributes to a condition of air pollution.
- (b) Notification. Each owner/operator of a demolition/renovation operation involving asbestos-containing material shall:
  - 1. Provide the Department with all information required on a Department-approved form with respect to the intended demolition/renovation operation of a facility or facility component. A waiver to the notification provisions contained in 310 CMR 7.15(1)(b)2.a. and b., may be granted by the Department in the case of an emergency.
  - 2. Postmark or deliver all required information to the applicable Department regional office:
    - a. at least ten working days before a demolition/renovation operation begins, or
    - b. within one working day prior to the beginning of an emergency demolition/renovation operation unless a waiver is granted by the Department, or if less than one working day, notification shall be made initially by telephone with written follow-up, or
    - c. where an owner/operator receives written Department approval of a planned demolition/renovation operation occurring during a 12 month period, provide revised information as required by the Department in writing, and a monthly report of updated information for actual work performed.
  - 3. Include but not be limited to the following information on the Department-approved form:
    - a. Name, address, and telephone number of the facility owner, operation manager, if any, contractor, and subcontractor, if any, contractor's or subcontractor's Massachusetts asbestos removal certification and licensing number, if any;
    - b. Description of the facility being demolished and renovated, including the address, worksite location or locations as described in 7.15(1)(b)2.c., size, age, and prior and current use of the facility;

- c. Estimate (in linear feet or square feet) of the approximate amount of asbestos-containing materials to be handled under this application with a description of the techniques used for the estimation;
  - d. Scheduled start-up and completion dates of the demolition/renovation operation, transportation, storage at a refuse transfer station facility (if applicable), and disposal at a sanitary landfill site of the asbestos-containing waste material; if the demolition/renovation start-up or completion date changes or is cancelled ensure that notification is made in writing at least one working day prior to the originally-scheduled start date of the operation;
  - e. Description of proposed demolition/renovation operation and procedures to be used;
  - f. Name, address, and telephone number of the transporter company(s) responsible for transporting asbestos-containing waste material from the demolition/renovation site to storage site, if any, and to final disposal site;
  - g. Name, address, and telephone number of the refuse transfer station facility and owner responsible for storing the asbestos-containing waste material prior to final transport and disposal at a sanitary landfill site;
  - h. Name, address, and telephone number of the sanitary landfill facility and owner where the asbestos-containing waste material will be disposed;
  - i. For a facility described as an emergency demolition/renovation operation, the name, title, and authority of the state or local government official who evaluated the emergency and ordered the operation;
  - j. Date and signature of the facility owner/operator or facility owner's designee and date and signature of the contractor.
4. Separate notification will be required, except as to 310 CMR 7.15(1)(b)2.c., when:
- a. demolition/renovations are scheduled for widely-spaced geographical locations on the same facility;
  - b. demolition/renovations are scheduled for a single facility, but are separated by a time period of greater than one week; or
  - c. when a demolition/renovation is postponed more than 30 days from the date on the initial notification.

5. Notwithstanding the requirements of 310 CMR 7.15 (1)(b) (1-4), management of ~~a~~Asbestos-containing Source ~~m~~Material in soil at a disposal site for which response actions are being conducted pursuant to MGL c. 21E and 310 CMR 40.0000 (the Massachusetts Contingency Plan) does not require notification pursuant to this section, except that, when the response action is a "Limited Removal Action" conducted pursuant to 310 CMR 40.0318 and includes 20 or more cubic yards of ~~Debris soil~~ ~~C~~ontaining ~~Releasable~~-Asbestos Source Material (as defined in 310 CMR 40.0000~~06~~), notification to the Department is required pursuant to 310 CMR 7.15. (Please note: no notification to the Department is required for Limited Removal Actions involving less than 20 cubic yards of ~~soil Debris-C~~ containing ~~Releasable~~-Asbestos Source Material).

6. Notwithstanding the requirements of 310 CMR 7.15 (1)(b) (1-4), management of soil containing ~~A~~asbestos ~~-containing m~~Source Material at a concentration that exempts such soil from classification as Asbestos-Containing Waste Material as defined in 310 CMR 7.00 does not require notification pursuant to 310 CMR 7.15.

- (c) Procedures for Asbestos Emission Control. Each owner/operator shall comply with the following procedures to prevent visible or particulate emissions to the ambient air space:
1. Remove any asbestos-containing material from a facility or facility component prior to demolition/renovation operations if such operations will cause asbestos emissions, or will render the asbestos-containing material friable, or will prevent access to the

asbestos-containing material for subsequent containment and removal;

2. When a facility component covered or coated with asbestos-containing material is being removed in units or as sections:

- a. Adequately wet asbestos-containing material exposed during the removal operations;
- b. Lower the units or sections to the ground level so as to not cause airborne emissions of asbestos; and
- c. Ensure no release of asbestos to the ambient air space during removal of asbestos from these units or sections handled so as to ensure:
  - i. maintaining adequate wetness of the asbestos-containing material, and
  - ii. sealing the work area and using a local exhaust ventilation and collection system designed and operated to capture particulate asbestos material. This system must exhibit no visible or particulate emissions to the outside air and be designed and operated in accordance with the requirements of 7.15(1)(d), Air Cleaning;

3. When asbestos-containing material is being removed from a facility component the following procedures shall be performed:

- a. Ensure that such material is adequately wet;
- b. Contain the material *in situ* of the facility component;
- c. Lower the contained material carefully to the ground so as to prevent emissions;
- d. Ensure no release of asbestos emissions by methods of capture and containment of fugitive dust such as work area seal and air cleaning, as described in 310 CMR 7.15.

4. Once the asbestos-containing material have been removed and wetted, ensure that the material remains wet until and after it is sealed into a container for disposal.

(d) Air Cleaning. The owner/operator using air cleaning at a facility shall properly install, use, operate, and maintain all air-cleaning equipment authorized by 310 CMR 7.15(1)(d). Bypass devices may be used only during upset or emergency conditions and then only for so long as it takes to shut down the operation generating the particulate asbestos-containing material. Each owner/operator shall use one of the following air cleaning systems or their equal:

1. Use fabric filter collection devices and perform the following:
  - a. operate the fabric filter collection devices at a pressure drop of no more than four inches water gauge, as measured across the filter fabric;
  - b. ensure that the air flow permeability, as determined by ASTM Method D737-75, does not exceed 350 ft<sup>3</sup>/min/ft<sup>2</sup> for felted fabrics;
  - c. ensure that felted fabric weighs at least 14 ounces per square yard and is at least 1/16 inch thick throughout; and
  - d. avoid the use of synthetic fabrics that contain fill yarn other than that which is spun; or
2. Use portable, high efficiency particulate air (HEPA) filtered power exhaust units equipped with negative air pressure systems with operational alarm system capable of indicating the unit is working properly, and utilizing a clean filter specified for the unit and capable of filtering 0.3 micron particles with 99.97% efficiency; or
3. In the event that the use of an air cleaning system causes a fire or explosion hazard, the Department may authorize as a substitute
  - a. the use of wet collectors designed to operate with a unit contracting energy of at least 40 inches water gauge pressure; or
  - b. the use of filtering equipment other than that described in 310 CMR 7.15, if the owner/operator demonstrates to the Department's satisfaction that it is as efficient in filtering particulate asbestos material.

(e) Waste Disposal. Each owner/operator shall:

1. Discharge no visible or particulate emissions to the ambient air during the collection, processing, packaging, transporting, transferring, or disposing of any asbestos-containing waste material, and use the disposal methods specified in 310 CMR 7.15(1)(e) such that the asbestos-containing material is non-friable;

- a. adequately wet asbestos-containing waste material obtained from air cleaning equipment or from removal operations and, while wet, containerize and seal the asbestos-containing waste material in leak-tight containers, labeled

CAUTION  
Contains Asbestos  
Avoid Opening or  
Breaking Container  
Breathing Asbestos is Hazardous  
to your Health

or, use warning labels specified by Occupational Safety and Health Standards of the Department of Labor, Occupational Safety and Health Administration (OSHA), or

- b. process asbestos-containing waste material into non-friable form such as pellets or other shapes; or
- c. use an alternative processing method that has received prior approval by the Department.

2. Store at a refuse transfer station facility permitted to manage asbestos waste in accordance with 310 CMR 19.061: *Special Waste*.

3. Dispose of asbestos-containing waste material at an approved sanitary landfill special waste site. If within Massachusetts, such sites must be operated in accordance with 310 CMR 19.000. Outside Massachusetts, such sites must be operated in accordance with applicable state and federal asbestos laws.

(f) Spraying. No owner/operator of a facility shall spray on any facility or facility component any asbestos-containing material.

(g) Insulating Material. No owner/operator of a facility may install or reinstall on a facility or facility component asbestos-containing insulating material.

**(h) If at the completion of an abatement conducted pursuant to the requirements of 310 CMR 7.15, soil outside of a building is found to contain Asbestos Source Material (as defined at 310 CMR 40.0006) in a quantity that exceeds the criteria for reporting established by the Massachusetts Contingency Plan (310 CMR 40.0000), compliance with that Plan shall be required. [SW Note: This would replace the guidance to “remove 6” of soil around the pipe...]**

(2) Enforcement Provisions. 310 CMR 7.15 is subject to the enforcement provisions in 310 CMR 7.52, except as to 310 CMR 7.15(1)(b).

### 3.0 Proposed Amendments to the Solid Waste Regulations to Address Asbestos in Soil

NOTE: **Bold** sections are the proposed changes to address asbestos in soil.

#### 19.061: Special Waste

- (1) General . No solid waste management facility shall receive, store, process, treat or dispose of a special waste unless said solid waste management facility:
  - (a) is operated and maintained in compliance with a valid site assignment, plan approval or permit and any authorizations issued by the Department;
  - (b) has received written approval from the Department to handle the specific special waste pursuant to 310 CMR 19.061(5) and operates in compliance with the conditions of the approval, if required herein; and
  - (c) manages the waste in accordance with the requirements of 310 CMR 19.061(6).
- (2) Classification of Special Wastes . A solid waste is classified as a special waste if:
  - (a) the waste is a special waste listed in 310 CMR 19.061(3); or
  - (b) the waste will require special management to ensure protection of public health, safety or the environment based upon the physical, biological, or chemical properties of the waste.
- (3) Listed Special Wastes . Solid wastes that the Department has classified as listed special wastes include:
  - (a) **asbestos containing waste material, as defined at 310 CMR 7.00; [SW: edits to clarify]**
  - (b) infectious wastes, except as specified in 310 CMR 19.061(6)(c)4.;
  - (c) sludges, including but not limited to wastewater treatment sludges, drinking water treatment sludges and industrial process wastewater treatment sludges.
- (4) Application to Manage Special Wastes .
  - (a) General .
    1. Solid waste management facilities shall use the application procedures described in 310 CMR 19.061(4), to apply to the Department for approval to manage a special waste.
    2. The application shall include such information, data and descriptions as required by the Department to fully assess the nature of the special waste, its handling requirements and the capability of the facility to properly manage the waste.
  - (b) Filing . An application for approval to manage a special waste shall be filed with the Department. At the time of application to the Department, a copy of the application shall be filed with the board of health in whose jurisdiction the facility is located.
  - (c) Application for Special Wastes Other Than Asbestos and Infectious Wastes

Except for asbestos waste and infectious waste as specified in 310 CMR 19.061(4)(d), applications to manage special wastes shall include the information specified in 310 CMR 19.061(4)(c). Data submitted on the physical, chemical or biological properties of the waste shall be generated from analyses of representative samples of the waste for each source of the waste. The application shall include:

- identification of the solid waste management facility;
2. identification of the generator(s) of the waste and the specific source or sources of the waste;
3. a general description of the nature of the waste;
4. a description of the industrial or other process which generates the waste;
5. the quantity of the waste to be disposed and frequency of disposal (volume and/or tonnage per month or year);
6. a detailed description of the physical properties of the waste including, but not limited to size, density and percent solids;
7. a detailed description of the chemical properties of the waste including, but not limited to pH, reactivity, leachability and total metals;
8. a demonstration that the waste is not a hazardous waste pursuant to 310 CMR 30.000;
9. the biological properties of the waste, if applicable, including, but not limited to pathogens;
10. identification of special waste handling procedures to be employed by the facility to ensure proper management of the special waste; and
11. other information about the waste or the solid waste management facility as required by the Department in order to classify the waste or to determine the ability of the facility to handle the material.

(d) Applications for Asbestos Wastes and Infectious Wastes . Applications to manage asbestos wastes or infectious wastes shall include:

1. identification of the solid waste management facility;
2. the quantity of the waste to be handled or disposed (volume and/or tonnage per month or year);
3. identification of special waste handling procedures to be employed by the facility to ensure proper management of the special waste; and
4. other information about the waste as required by the Department in order to determine the ability of the facility to handle the special waste.

(5) Department Approval to Manage Special Wastes .

(a) Classifications . When the waste is not a listed special waste, the Department shall determine whether the waste is classified as a special waste. The Department's determination shall be based upon the quantity of waste, the physical, biological and chemical properties of the waste and whether the waste will require special management to ensure protection of public health, safety or the environment.

(b) Decision . The Department shall determine whether a facility shall receive approval to manage the special waste identified in the application. The Department shall base its decision on whether the facility can safely manage the special waste.

(c) Issuance of a Decision . The Department shall issue a written decision for

all wastes for which it receives a request conforming with the requirements set forth in 310 CMR 19.061(4).

(d) Conditions . The Department may issue an approval to manage a special waste subject to any conditions the Department deems necessary to protect public health, safety or the environment. The approval may also contain a condition prohibiting the applicant from accepting the special waste for a period of not less than 14 days, to allow the Department to review comments from the board of health submitted pursuant to 310 CMR 19.061(5)(f), unless the Department determines that an adverse impact would result from a delay in disposal.

(e) Permit Modification . If the Department determines that the handling of a waste at a facility shall cause a deviation from the approved plan or permit, the operator shall submit an application for permit modification in accordance with 310 CMR 19.039.

(f) Board of Health Notification and Comment Period .

1. The board of health shall be notified of the Department's decision on an application to manage a special waste.

2. Within 14 days of receiving such notification the board of health may request the Department to rescind or modify an approval to manage a special waste where the board of health deems that the handling of the special waste would have an adverse impact.

(g) Modification or Recision . The Department shall modify or rescind, as appropriate, an approval to accept special waste if the board of health demonstrates to the satisfaction of the Department, in the request filed in accordance with 310 CMR 19.061(5)(f), that the acceptance of the special waste under the conditions which may have been imposed by the Department is likely to result in an adverse impact.

(6) Management Requirements for Special Wastes .

(a) General Requirements . The following conditions shall apply to any solid waste management facilities handling special wastes:

1. the operator shall keep a copy of the approval to manage a special waste on file at the facility and make available said approval letter upon request by Departmental representatives; and

2. the operator shall instruct and train employees in proper handling procedures for any special waste approved to be managed by the facility.

(b) Requirements for Handling Asbestos Wastes . In addition to the requirements at 310 CMR 19.061(6)(a), all asbestos waste, except as specified in 310 CMR 19.061(6)(b)3., shall be managed in accordance with 310 CMR 19.061(6)(b)1. and 2.

1. All facilities shall observe the following requirements for handling asbestos waste:

a. Asbestos waste shall not be accepted for disposal at solid waste combustion facilities.

b. Asbestos waste that has not been properly wetted, containerized and labeled according to 310 CMR 7.15 shall not be accepted at any solid waste management facility.

c. Asbestos waste that has been properly wetted, containerized and labeled in accordance with 310 CMR 7.15 shall not be accepted at any

solid waste facility unless that facility has received approval from the Department in accordance with 310 CMR 19.061 to accept asbestos waste.

d. Asbestos waste that has been properly wetted, containerized and labeled shall be managed so as to maintain the integrity of its containers and to prevent emissions of asbestos fibers to the ambient air.

2. Landfill Specific Requirements . In addition to the requirements in 310 CMR 19.061(6)(b)1., landfills that have received approval from the Department to accept asbestos waste shall observe the following operational requirements:

a. Asbestos waste shall be immediately disposed in the landfill and shall not be stored at the landfill prior to placement in the landfill.

b. Asbestos waste shall be placed in the landfill in such manner as to prevent the release of asbestos fibers to the air during placement.

c. Asbestos waste shall be placed in the landfill using a method approved by the Department. The approved method shall be as described in 310 CMR 19.100 through 19.204 in Department guidance or in a Department approval or permit. All such approved placement methods shall include requirements that the asbestos waste is covered by sufficient amounts of either solid waste that does not contain asbestos and/or daily cover material to assure that no asbestos fibers are released to the air during or subsequent to compaction.

d. Accurate records of the surveyed location in the landfill of all asbestos waste shall be maintained. Locations of asbestos deposition shall be noted in the Record Notice of Landfill Operation pursuant to 310 CMR 19.100 through 19.204. Locations of asbestos deposition shall also be included whenever information regarding the property is recorded on the property deed pursuant to M.G.L. c. 111, § 150A.

e. Areas of the landfill containing asbestos shall be clearly marked by the operator.

f. Areas of the landfill containing asbestos waste shall not be excavated.

3. Requirements for certain classes of asbestos wastes . The following asbestos wastes are not subject to the provisions of 310 CMR 19.061 except as specified at 310 CMR 19.061(6)(b)1.a.:

a. intact and unbroken vinyl asbestos tile (VAT);

b. asphaltic asbestos-containing siding products and asphaltic asbestos-containing materials such as roofing felts, and roofing shingles (Note: This does not include other asbestos containing roofing shingles and siding products such as those containing a cementitious binding characterized as being hard and brittle.); and

c. soil containing ~~only a~~Asbestos-containing Source mMaterial at a concentration that is less than 150 mg<sub>ACM</sub>/kg<sub>soil</sub>, and/or soil containing unconsolidated fibers of asbestos in the absence of source material.

[Note: The Department will issue guidance concerning acceptable laboratory methods for determining the concentration of Asbestos Source Material in soil]

d. other asbestos waste so designated by the Department in writing.



(c) Requirements for Handling Infectious Waste . In addition to the requirements at 310 CMR 19.061(6)(a), infectious waste shall be handled in accordance with the following:

1. In addition to the requirements of 310 CMR 19.000, infectious waste shall be treated, packaged, labeled and disposed of in accordance with 105 CMR 480.000.
2. Landfills . Infectious waste shall not be disposed in a solid waste landfill unless the waste is processed and managed to meet the requirements of 310 CMR 19.061(6)(c)4.
3. Facilities other than landfills . Infectious waste (which has not been rendered non-infectious) shall not be accepted at a solid waste management facility unless that facility has received approval under 310 CMR 19.061 to manage infectious waste.
4. Infectious waste that has been rendered non-infectious in accordance with 105 CMR 480.000 and is packaged, labeled and otherwise managed in accordance with 105 CMR 480.000 is not subject to 310 CMR 19.061 and may be accepted at any solid waste facility.

(d) Requirements for Handling Sludges . In addition to the requirements at 310 CMR 19.061(6)(a), sludges shall be handled in accordance with the following:

1. General Requirements . Disposal of all types of sludges shall comply with the following requirements.
  - a. Sludges accepted at a solid waste facility shall not contain free draining liquids.
  - b. Sludges disposed at landfills shall contain a minimum of 20% solids.
  - c. Odor control methods, acceptable to the Department, shall be employed at all landfills accepting odor-producing sludges.
2. Requirements for Sewage Treatment and Water Treatment Sludges . In addition to the requirements set forth at 310 CMR 19.061(6)(d)1., sewage treatment and water treatment sludges shall comply with the following requirements.
  - a. Sewage treatment and water treatment sludges shall be incorporated into the active face of a landfill in a 3:1 mixture of solid waste to sludge or placed in a designated area and covered immediately.
  - b. Sewage treatment sludges may be accepted at a solid waste landfill only after land application and composting options have been investigated by the applicant or by the generator of such sludge and determined by the Department not to be feasible, provided that said investigation of options may be deferred for a reasonable time upon a determination by the Department that adverse impacts may occur as a result of delaying disposal of the sludge.
  - c. Sewage treatment sludges containing pathogens that have not been stabilized using methods approved by the Department shall not be disposed at an unlined landfill, unless specifically approved by the Department on a temporary basis.
3. Requirements for Industrial Wastewater Treatment Sludges . In addition to the requirements set forth at 310 CMR 19.061(6)(d)1., industrial wastewater treatment sludges shall comply with the following requirements.

The solid waste management facility operator shall provide data, descriptions and other information required at 310 CMR 19.061(4) to the Department for each separate source of industrial wastewater treatment sludge prior to acceptance at the landfill.

(7) Reclassification . The Department may reclassify a waste in accordance with 310 CMR 19.061(5) or place further conditions on an approval to manage a special waste in accordance with 310 CMR 19.061 should such action be deemed necessary. Any such reclassification or conditions shall be in writing.

#### 4.0 Proposed Amendment of MassDEP Policy # COMM 97-001, “Reuse and Disposal of Contaminated Soil at Massachusetts Landfills”

*Note: This section contains the sections of Policy # COMM 97-001 that would be revised to include asbestos in soil. A complete version of this Policy is available at <http://www.mass.gov/dep/cleanup/laws/finalpol.htm>.*

#### 4.1 Terminology

This section contains definitions of the important terms and acronyms used in this Policy.

...

~~Debris Containing Asbestos Source Material~~ means ~~Debris Material~~, as defined at 310 CMR 40.0006, that includes any material (1) that is contains 1 percent or more asbestos by area, as determined by a laboratory certified by the Massachusetts Division of Occupational Safety and using a method approved by the U.S. Environmental Protection Agency, and (2) that (a) when dry can be crumbled, pulverized or reduced to powder by hand pressure, or (b) has become crumbled, broken or crushed.

#### 4.2 Contaminant Levels, and Approval Procedures for the Reuse and Disposal of Contaminated Soil at Massachusetts Landfills

4.1 Contaminant Levels for Reuse  
Table 1

CONTAMINANT	Reuse Levels (mg/kg) <sup>a</sup>	
	Lined Landfills	Unlined Landfill
Total Arsenic	40	40
Total Cadmium	80	30
Total Chromium	1,000	1,000
<del>Total Debris Containing Asbestos Source Material</del> <sup>g</sup>	<del>1,000<sup>h</sup> mg<sub>ASM</sub>/kg<sub>soil</sub></del> <del>8,000<sup>i</sup> mg<sub>ASM</sub>/kg<sub>soil</sub></del>	<del>1,000<sup>h</sup> mg<sub>ASM</sub>/kg<sub>soil</sub></del> <del>8,000<sup>i</sup> mg<sub>ASM</sub>/kg<sub>soil</sub></del>
Total Lead	2,000	1,000
Total Mercury	10	10
Total Petroleum Hydrocarbons (TPH)	5,000	2,500
Total PCBs <sup>b</sup>	< 2	< 2
Total SVOCs <sup>c</sup>	100	100
Total VOCs <sup>d</sup>	10	4
Conductivity <sup>e</sup> (umhos/cm)	8,000 umhos/cm	4,000 umhos/cm

Listed or Characteristic Hazardous Waste (TCLP) <sup>f</sup>	NONE	NONE
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TABLE 1 NOTES:

- a The reuse levels are expressed as total levels in mg/kg, except where otherwise noted, and apply to reuse of soil as daily cover, intermediate cover, and pre-capping contour material at lined landfills and unlined landfills as described in this Policy.
- b Total concentrations of polychlorinated biphenyls EPA Method 8080.
- c Total concentrations of compounds listed in EPA Method 8270.
- d Total concentration of compounds listed in EPA Method 8260.
- e For soil which may be expected to contain elevated NaCl.
- f TCLP testing shall be performed for metals or organic compounds when the total concentrations in the soil are above the theoretical levels at which the TCLP criteria may be exceeded. For guidance parties shall consult United States Environmental Protection Agency, Memorandum #36, "Notes on RCRA Methods and QA Activities", pp. 19-21, Gail Hanson, January 12, 1993.
- g Total ~~Debris-Containing~~ Asbestos Source Material as measured using the MassDEP Sieve Method for Asbestos
- h Concentration limit for reuse of soil contaminated with ~~Debris-Containing~~ Asbestos Source Material as alternative daily or intermediate cover.
- i Concentration limit for reuse of soil contaminated with ~~Debris-Containing~~ Asbestos Source Material as pre-capping contour material (e.g., grading and shaping material).

[Please note that the methods specified in footnotes d, e, and f indicate the universe of chemicals to be added up in calculating the total concentrations for these classes of contaminants. Section 5.0 of this Policy provides guidance for determining which specific chemicals must be considered chemicals of concern (e.g., contaminants) within the soil. This Policy does not specify the analytical test methods to be used to quantify the specific contaminants. Readers can consult 310 CMR 40.0017 Environmental Sample Collection and Analysis, 310 CMR 30.110 Criteria, Procedures for Determining Which Wastes are to be Regulated as Hazardous Waste or Non-Hazardous Waste and 310 CMR 30.151 Representative Sampling Methods for additional information which may be applicable to the selection of appropriate sampling and analytical methods.]

[Please note that the methods specified in footnotes d, e, and f indicate the universe of chemicals to be added up in calculating the total concentrations for these classes of contaminants. [Section 5.0](#) of this Policy provides guidance for determining which specific chemicals must be considered chemicals of concern (e.g., contaminants) within the soil. This Policy does not specify the analytical test methods to be used to quantify the specific contaminants. Readers can consult [310 CMR 40.0017](#) *Environmental Sample Collection and Analysis*, 310 CMR 30.110 *Criteria, Procedures for Determining Which Wastes are to be Regulated as Hazardous Waste or Non-Hazardous Waste* and 310 CMR 30.151 *Representative Sampling Methods* for additional information which may be applicable to the selection of appropriate sampling and analytical methods.]

## 5.2 Testing

Contaminated Soil shall be sampled at sufficient and adequately distributed locations so that the concentrations of the Contaminants of Concern in the soil are adequately characterized.

Note that the contaminants listed in Table 1 may not all be Contaminants of Concern, and analysis for all the Table 1 parameters is not required. The factors listed below shall be considered when developing and implementing such a sampling plan. Evaluation of release, source, and site specific conditions assist in developing the basis for the selection of field screening techniques, sampling methodologies, sampling frequencies, and the contaminants of concern (e.g., analytical parameters) used to characterize Contaminated Soil. These include, but are not necessarily limited to the following:

- the type(s) and likely constituents of the petroleum oil (e.g., unused waste oil, used waste oil, or mixtures) or hazardous material known or suspected to be the source of the contaminants;

- the presence or likelihood of any other oil and/or hazardous materials (e.g., chlorinated solvents, metals, polychlorinated biphenyls (PCBs), semi-volatile organic compounds (SVOCs), halogenated volatile organic compounds (VOCs));
- current and former site uses, past incidents involving the spill or release of oil and/or hazardous material, and past and present management practices of oil and/or hazardous materials at the site;
- the potential for the soil to contain listed hazardous waste or to be a characteristic hazardous waste;
- visual/olfactory observations, field screening, analytical data, and/or in-situ pre-characterization data;
- soil matrix type - naturally occurring soil or fill/soil mixtures (e.g., homogeneous or heterogeneous soil conditions);
- the identification and segregation of discrete "hot spots";
- soil volume; and
- the presence of anthropogenic contaminants (e.g., arsenic, lead).

### 5.3 Treated TCLP Soil

Generators of Treated TCLP Soil shall also comply with the characterization, waste analysis, notification, reporting and licensing requirements of the applicable federal and state Hazardous Waste Regulations. These requirements may include, but are not limited to, the provisions of Title 40 Code of Federal Regulations Parts: 262.11, 264, 265, and 268.

### 5.4 Residential Lead Soil

Residential Lead Soil shall be characterized as described in this Policy to determine whether it meets *all* the acceptance criteria, contaminant levels and guidelines of this Policy. The characterization shall include ascertaining whether the Contaminated Soil: exceeds the contaminant levels in **Table 1**; contains other oil and/or hazardous materials or listed hazardous waste; or if it is a characteristic hazardous waste other than lead (i.e., D001-D007, or D009-D043 Hazardous Waste).

Residential Lead Soil intended for reuse or disposal at a lined landfill need not be tested to determine if it is D008 TC Waste (e.g., lead). Residential Lead Soil intended for reuse at an unlined landfill that does not contain total lead *in excess* of 1000 mg/kg also does not require TCLP testing to determine if it is a D008 TC Waste (e.g., lead). However, the Department may require TCLP testing for Residential Lead Soil intended for reuse at an unlined fill if the total lead level exceeds 1000 mg/kg.

### 5.5 Documentation

When accepting Contaminated Soil a landfill operator shall obtain sufficient information and documentation to determine whether the Contaminated Soil has been adequately characterized, meets the Policy's acceptance criteria, and may be reused by the landfill, as provided in this Policy. The documentation shall include, but not necessarily be limited to, the following types of information:

- quantity of Contaminated Soil;
- a description of the source and type of the release and the contaminants;
- a description of current and former site usage;
- chemical characterization of the soil including any laboratory analytical data used to support the determination;
- any field screening analytical data used to support the determination;
- a physical description of the soil including the soil classification method used;

- a statement from the generator as to whether any other releases or spills have occurred in the vicinity of the site which may have affected the site, including the types of oil and hazardous material spilled/released;
- [a statement from a Licensed Site Professional as to the appropriate Contaminants of Concern for the site and the basis for their selection;](#)
- a statement that the generator has used due diligence, as described in the Department's Policy HW93-01 in characterizing the soil and as to whether or not the soil contains a listed hazardous waste and/or is itself a characteristic hazardous waste; and
- in addition, for TCLP-Treated Soil, from the treater, a description of the treatment process and a copy of the waste analysis plan complying with Title 40 Code of Federal Regulations Part 264, 265, or 268, as applicable.

## 5.0 Guidance: Best Management Practices for Bulk Loading of ~~ACM Soil/Debris~~Soil Containing Asbestos Source Material

Applicability: This Guidance applies to soil that is a) contaminated with Asbestos Source Material (as defined in the MCP at 310 CMR 40.0006) and b) is being excavated during a Remedial Response Action. The Guidance is designed to ensure that 1) asbestos fibers entrained in air at work sites are identified quickly, 2) prompt action is taken when needed to prevent a risk of harm to work site neighbors, and 3) asbestos contamination is not tracked to other properties or released as contaminated soil is trucked to its disposal or re-use site).

1. Conduct perimeter air sampling on all four sides of the work area during all active handling operations (unless containment is used) **in accordance with the requirements of 453 CMR 6.00:**

**a. Employ a DOS-certified Asbestos Project Monitor to perform air monitoring. [Please note: as of 10/11/07, this requirement is under discussion with DOS]**

**a.b.** Use phase contrast microscopy (PCM) to analyze a minimum of 8 air monitoring samples per 8-hour shift, and perform PCM analysis on-site to obtain real-time data (maintain data on-site). On 10% of samples, use transmission electron microscopy (TEM) to verify PCM results.

**b.c.** Stop work and notify BWP if fiber levels exceed 0.01 fibers/cc. **[SW: what makes sense to require at 21 E sites?]**

**e.d.** If containment is used for handling, collect and analyze clearance air monitoring samples prior to breaking down or moving containment.

~~d. Employ a DOS-certified Asbestos Project Monitor to perform air monitoring.~~

### 2. Loading Operations

- a. Keep ~~ACM soils~~ containing Asbestos Source Material wet during excavation, handling and loading so that no dust is generated.
- b. If mechanical screening of ~~ACM soil~~ containing Asbestos Source Material to remove debris will be performed, conduct screening in a negative-pressure contained work area using air cleaning.
- c. Clearly delineate (e.g., identify and mark) routes from loading area to equipment decontamination area to avoid contamination spread.
- d. Load soil from excavation directly into trucks or containers and avoid stockpiling of soil (i.e., to limit number of times soil is handled).
- e. Prevent visible emissions during all operations.
- f. To the extent feasible, use loading machinery that creates the least amount of soil disturbance (e.g., an excavator is preferable to a vacuum loader) and facilitates decontamination (e.g., tire vehicles are preferable to tracked vehicles).
- g. If a vacuum loader is used, the material outlet / loading operations must be conducted under negative-pressure containment.

### 3. Packaging

- a. Line each container or truck with a ~~6-millimeter-thick~~ polyethylene truck body liner that is at least 6 millimeters thick. Polyethylene liners should be designed and sized for the container to be used and should be extended along the inside of the truck or container-bed gate to protect against contamination during loading and to facilitate decontamination. After loading, the liner should be sealed.
- b. Cover each truck with high-density tie-down tarps instead of pull-back covers.

- c. For containers of ~~A~~asbestos ~~C~~ontaining ~~W~~aste Material (as defined at 310 CMR 7.00), place labels that note: ~~a) “a~~Asbestos ~~d~~Danger” and ~~b) identify the~~ generator on top of sealed liner~~;~~. In addition, place the U.S. DOT asbestos placard (2212) on all four vertical sides of the container or vehicle being used.

#### 4. Decontamination

- a. Use 3-stage personnel decontamination as appropriate.
- b. Establish an equipment decontamination area and ensure that the decontamination pad for equipment is constructed to withstand use, in terms of weight of equipment, frequency of use, length of the job, etc. (e.g., multi-layer, with materials such as stone, EPDM-rubber roofing, hay bales, filters and pumps).
- c. Prior to disposal, collect and filter all water used in the decontamination process using a 5-micron filter and dispose of the filter as asbestos waste. Pre-filtration screening or pre-treatment should be implemented as needed to keep the 5-micron filter from clogging. Decontamination water that has been filtered with a 5-micron screen should be reused where possible. Disposal should be done in accordance with management plans for other wastewater generated by construction activities at the location.
- d. Clean the decontamination area as needed, at a minimum at the end of every shift.
- e. Waste resulting from the breakdown of personnel and equipment decontamination should be handled as ~~A~~asbestos ~~C~~ontaining ~~w~~Waste ~~m~~Material and should be packaged and disposed of accordingly.

#### 5. Personal protective equipment

- a. Follow 453 CMR 6.00 Worker Protection Requirements and OSHA standards at 29 CFR Part 1926.1101.

#### 6. Training/certifications

- a. ~~Follow 453 CMR 6.00 Training and Certification Requirements~~Workers conducting Remedial Response Actions need to have U.S. OSHA-mandated training for work at hazardous waste sites, as appropriate. They will not need to be specially trained and certified in accordance with 453 CMR 6.00 (regulations promulgated by the Massachusetts Division of Occupational Safety for asbestos workers), although they are encouraged to complete a two-hour “asbestos awareness” course that meets OSHA requirements.